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Central Intelligence Agency

Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

18 OCT 1984

MEMORANDUM FOR: Donald H. Pearlman
Executive Assistant to the Secretary
Department of Energy

FROM: [redacted] 25X1
Director of Global Issues

SUBJECT: Excess Oil Productive Capacity Outside the Persian Gulf [redacted] 25X1

I would like to direct your attention to the attached report addressing the availability of surplus oil productive capacity outside the Persian Gulf that could be returned to production in a 30-day period. Surplus capacity figures are based on fourth quarter 1984 production projections recently agreed upon by the Data Base and Projections Group. [redacted] 25X1

[redacted] 25X1

If you or members of your staff have questions concerning the report, please call [redacted] 25X1

Attachment: 25X1
Excess Oil Productive Capacity Outside the Persian Gulf [redacted]
GI M 84-10176, October 1984 [redacted] 25X1

[redacted] 25X1

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[redacted]

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SUBJECT: Excess Oil Productive Capacity Outside the Persian Gulf [redacted]

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OGI/SRD/SF/[redacted] (11 Oct 84)

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11 October 1984

Excess Oil Productive Capacity Outside the Persian Gulf

Summary

Excess oil productive capacity worldwide will shrink to about 7 million b/d in fourth quarter 1984 if production rises in line with most market forecasts, including our own consensus interagency projection. The cushion of spare capacity available to offset a Persian Gulf disruption is particularly thin. According to our projections, surplus capacity outside the Persian Gulf will fall to only about 2.3 million b/d--less than 20 percent of Gulf output. Moreover, reporting from US Embassy sources [redacted] suggests that only about 1 million b/d of this could be available within 30 days of a decision to raise output--the remainder would take up to 90 days to return to production. Libya and Nigeria account for most of the surplus outside the Gulf that could be brought back on line in 30 days. Nonetheless, the likely availability of considerable excess capacity in Saudi Arabia and a buildup in consuming countries' stockpiles--particularly government stocks--should enable the market to cope with all but the most severe disruption without major price increases. [redacted]

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This memorandum was prepared by [redacted] Strategic Facilities Branch, Office of Global Issues. The information contained herein is updated to 10 October 1984. Comments may be directed to [redacted] Chief, Strategic Resources Division [redacted]

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Excess Oil Productive Capacity Outside the Persian Gulf

Introduction

The Iran-Iraq war has focused attention on the availability of excess oil productive capacity to offset a disruption in the Persian Gulf. In a recent report we indicated that surplus capacity worldwide was about 8 million b/d at mid-year 1984, of which nearly 3 million b/d was outside the Persian Gulf.* The question of how quickly this spare capacity can be brought back into production in response to an emergency remains a key concern. Many elements influence the response time, such as the procedures used to shut in capacity, the level of maintenance performed, and other technical as well as financial and manpower considerations. Also, a decision by a producing country to raise output will be affected by perceptions concerning the scope and likely length of a disruption, and possibly by political considerations. 25X1

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reporting has been received from US embassies 25X1
addressing the availability of surplus capacity within 30 days in some key oil producers outside the Persian Gulf. The sooner alternative supplies are made available during a disruption, the lower the probability of a runup in oil prices. 25X1

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Distribution of Excess Capacity

According to our projections, excess capacity will be even more concentrated in the Persian Gulf in the fourth quarter. Gulf countries will account for 4.6 million b/d of surplus capacity available within 90 days--double the excess capacity outside the Gulf. Saudi Arabia alone will account for 2.8 million b/d of spare capacity, or more than 40 percent of the total surplus available worldwide. 25X1

Outside the Persian Gulf, Libya and Nigeria with 600,000 b/d each and Venezuela with 500,000 b/d will have by far the lion's share of the 2.3 million b/d excess capacity that could be available in a 90-day period. Algeria and the United States with 200,000 b/d each and Indonesia and Mexico with 100,000 b/d each account for the remainder. 25X1

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30-Day Availability

The anticipated rise in fourth quarter output will eliminate much of the spare capacity that could otherwise be available within a 30-day period, since producers are likely to increase production from areas that are most accessible. According to our projections and reporting from US Embassy sources 25X1 on capacity in Libya, Nigeria, Venezuela, and Mexico, 25X1 these countries--which account for most excess capacity outside the Gulf--will have only about 800,000 b/d of excess capacity in the fourth quarter that could be brought on line in 30 days. Of this, Libya will have 400,000 b/d, Nigeria 300,000 b/d, and Venezuela 100,000 b/d. We have no indication how much of the remaining surplus capacity outside the Persian Gulf--in Algeria, the United States, and Indonesia--could be available in 30 days. 25X1

Libya will have the most capacity outside the Persian Gulf available with a 30-day leadtime in the fourth quarter, principally because its production is projected to increase only 100,000 b/d from the 1.1 million b/d averaged so far in 1984. 25X1

Nigeria could immediately increase production to 1.9 million b/d according to a mid-June assessment by the US Embassy in Lagos based on information from sources in the oil industry. Higher output would require 3 months. Because we project Nigerian production to rise sharply to about 1.6 million b/d in the fourth quarter, 30-day surplus capacity will slip to 300,000 b/d. 25X1 25X1

Venezuela can only bring an additional 100,000 b/d on stream very quickly according to information recently obtained from the state oil company by the US Embassy in Caracas. Venezuela's remaining spare capacity consists of heavy crudes in wells many of which have been shut in for over a year, and starting these up would take more time. Since we do not expect Venezuelan output to rise appreciably in the fourth quarter from recent levels of about 1.8 million b/d, this 100,000 b/d should still be available. 25X1 25X1

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Mexico could immediately increase its production by 100,000 b/d if circumstances warranted, according to a statement by the director of PEMEX made in late June to US Embassy representatives. Additional output would require costly investment and take up to 3-5 months to bring on line, according to the director. Because we expect Mexico to use this immediately available capacity in the fourth quarter, additional output probably would not be available on a 30-day basis.

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Other countries outside the Persian Gulf with spare productive capacity--Algeria, the United States, and Indonesia--have a total of 500,000 b/d according to fourth quarter projections which could be available with a 90-day leadtime. The availability of any of this capacity within 30 days is not known. On balance, however, it seems reasonable to use 1 million b/d as the best estimate for total spare capacity outside the Persian Gulf that could be brought on line within 30 days in the fourth quarter.

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Conditions for a Rapid Response

The technical capability to raise output with a 30-day leadtime does not ensure its availability. In the first instance, a producer has to be persuaded that its interests are served by increasing production. Perceptions that a disruption will be too short to warrant investment in reopening shut-in capacity, or that greater revenues can be garnered by first letting prices rise, can make producers reluctant to forge ahead. Political considerations can also come into play. For example, Libya might be loath to help bail out Western countries if Iran precipitates a major disruption.

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Reopening unused capacity rapidly also requires a special set of technical conditions. The leadtime depends heavily upon the manner in which capacity has been shut in. In some cases, wells are kept in production but volumes are reduced by choke valves. In other cases, production is rotated among different sets of wells every few days or so. Such rotation prevents crude oil with corrosive contaminants from sitting in well lines too long. In both cases, production should be able to be restored well within 30 days.

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Fields or sections of fields also are periodically shut in for well workovers and other maintenance. While such maintenance can frequently require more than 30 days, areas are continuously being returned to production while others are being shut in. By postponing maintenance in new areas, a net gain in available productive capacity can be realized almost immediately.

Facilities expected to be shut in for long periods require longer leadtimes to restore to production. Such facilities--including well lines, pumps, stabilizers, and gas-oil separation vessels--are often drained of corrosive crude and sometimes refilled with a noncorrosive fluid. This equipment must be drained and, in some cases, tested before returning to operation. The leadtime required would depend on manpower availability and the level of maintenance performed during down time.

In extreme cases, wells are plugged with cement and surface facilities are removed for use elsewhere. Iran has shut in much of its capacity in this manner both because of lower production targets and to reduce the vulnerability of some areas to war damage. Plugged wells must be redrilled before they can be brought back on line, and can take nearly as long as new wells depending on the accessibility and condition of surface facilities. Even after considering all these factors, our estimate of the surplus available is only an indication because the capacity of an oil system can never be known until it is tested.

Outlook

Although demand growth in the fourth quarter will reduce spare oil productive capacity, our judgments concerning the vulnerability of the oil market to a major disruption in the near term remain much the same as they did at mid-year. A Persian Gulf disruption not involving Saudi Arabia--for example, a cutoff of exports from Iran, Iraq, and Kuwait affecting less than 4 million b/d--still could be easily offset by other Gulf and non-Gulf producers and stock draws. If Saudi shipments through the Gulf are also interrupted--a low probability in our view--capacity elsewhere could not offset the loss and stock draws could not be depended upon to avoid price increases.

Excess Capacity for the Fourth Quarter 1984*
(million b/d)

Country	Projected Production	90-Day Available Capacity	90-Day Excess Capacity	30-Day Available Capacity	30-Day Excess Capacity
OPEC					
Saudi Arabia	5.7	8.5	2.8	8.5	2.8
Iran	2.4	3.2	0.8	NA	NA
Iraq	1.2	1.2	0.0	1.2	0.0
Kuwait	1.0	1.3	0.3	NA	NA
UAE	1.3	1.7	0.4	NA	NA
Qatar	0.4	0.6	0.2	NA	NA
Neutral Zone	0.5	0.6	0.1	NA	NA
Total Persian Gulf	12.5	17.1	4.6	NA	NA
Algeria	1.0	1.2	0.2	NA	NA
Ecuador	0.2	0.2	0.0	0.2	0.0
Gabon	0.2	0.2	0.0	0.2	0.0
Indonesia	1.5	1.6	0.1	NA	NA
Libya	1.2	1.8	0.6	1.6	0.4
Venezuela	1.8	2.3	0.5	1.9	0.1
Nigeria	1.6	2.2	0.6	1.9	0.3
Total	7.5	9.5	2.0	NA	NA
Total OPEC	20.0	26.6	6.6	NA	NA
Canada	1.8	1.8	0.0	1.8	0.0
Mexico	3.1	3.2	0.1	3.1	0.0
United States	10.9	11.1	0.2	NA	NA
North Sea	3.5	3.5	0.0	3.5	0.0
Other	6.0	6.0	0.0	6.0	0.0
Total non-Persian Gulf	32.8	35.1	2.3	NA	NA
Total non-OPEC	25.3	25.6	0.3	NA	NA
Total Market Economies	45.3	52.2	6.9	NA	NA

*Includes crude oil, natural gas liquids, other hydrocarbons and refinery processing gains.

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